

INTENTIONAL MEANING OF BONOBO GESTURES

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Unlike linguists, animal communication researchers cannot ask their subjects what they mean. Most animal communication is non-intentional, and the function of a signal can be assessed by looking at the outcome (Seyfarth, Cheney, & Marler, 1980). However, great ape gestural communication is intentional. Great apes direct their gestures towards a specific recipient; check the attention of that recipient; wait for that recipient to respond; and, if the recipient does not respond, the signaller persists and elaborates (Call & Tomasello, 2007; Cartmill & Byrne, 2007; Leavens & Hopkins, 1998; Tomasello, George, Kruger, Farrar, & Evans, 1985). These behaviours show that the signaller begins with an intended goal and uses gestures in order to achieve that goal; the signal therefore has meaning, in the sense of Gricean first order intentional meaning (Grice, 1969). To determine a signal's intentional meaning, we cannot just look at the outcome, as with its biological function. Rather, we see which outcome satisfies the signaller, showing that the "apparently satisfactory outcome" (ASO) matched the signaller's original intended goal (Cartmill & Byrne, 2011; Hobaiter & Byrne, 2014). Under the natural conditions likely to elicit a full range of intended meanings, this method of defining the meaning of great ape gestures has only so far been used for wild chimpanzees (Hobaiter & Byrne, 2014). In our current research, we use the same method for gestural communication of wild bonobos. Bonobos are chimpanzees' closest living relatives, having diverged approximately 0.8-0.9 MYA (Becquet & Przeworski, 2007; Won & Hey, 2005). Despite genetic closeness, their social systems are remarkably different. Bonobo females form the centre of parties and high-ranking females outrank males; they engage in frequent genito-genital rubbing and other forms of non-conceptive copulation; and they encounter peacefully with neighbouring communities (Furuichi, 2011; Idani, 1990; Kano, 1980). We already know that the chimpanzee and bonobo gestural repertoires overlap significantly in gesture form (Graham, Hobaiter, & Byrne, 2015), but not whether these shared gestures also have the same meanings. The data of this paper come from 900 hours of focal individual data and 4381 video clips from focal behaviour filming, collected during two six-month field seasons at Wamba, DR Congo. In order to catalogue the bonobo repertoire and examine the meaning of their gestures, we extracted gestures that met criteria for intentionality, in particular those that allowed us to recognize ASOs of the signaller. This paper will concentrate on differences in gesture form and meaning between bonobos and chimpanzees, and relate these differences to the strikingly different social and sexual behaviour of the two species.

Acknowledgements

Funding from the Wenner-Gren Foundation and University of St Andrews.

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